

Utah Influenza Report

This report contains data through the week ending 02/02/2013 (MMWR week 05).

Overview of Influenza Surveillance: Surveillance for the 2012-2013 influenza season officially began on September 30, 2012. The Utah Department of Health publishes a weekly report throughout the active influenza season that synthesizes data from a variety of sources to give the most complete and up-to-date picture of influenza activity in the state of Utah. Data in this report should be considered provisional, and may change as more complete reports are received.

Influenza-like Illness (ILI): The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) is a national system that conducts surveillance for influenza-like illness (ILI) in outpatient healthcare facilities. ILINet providers report weekly the total number of patients seen for any reason and the number of patients seen with ILI (defined as a fever $\geq 100^{\circ}$ F and a cough or sore throat). These data are used to determine the amount of ILI circulating in the community, as well as provide insight into regional differences in ILI activity. Currently, more than 50 facilities throughout Utah participate in ILINet.

Figure 1. Weekly Influenza-like Illness Activity

Influenza-like illness (ILI) activity as measured by the number of standard deviations from the epidemic threshold - Utah, 2012-2013

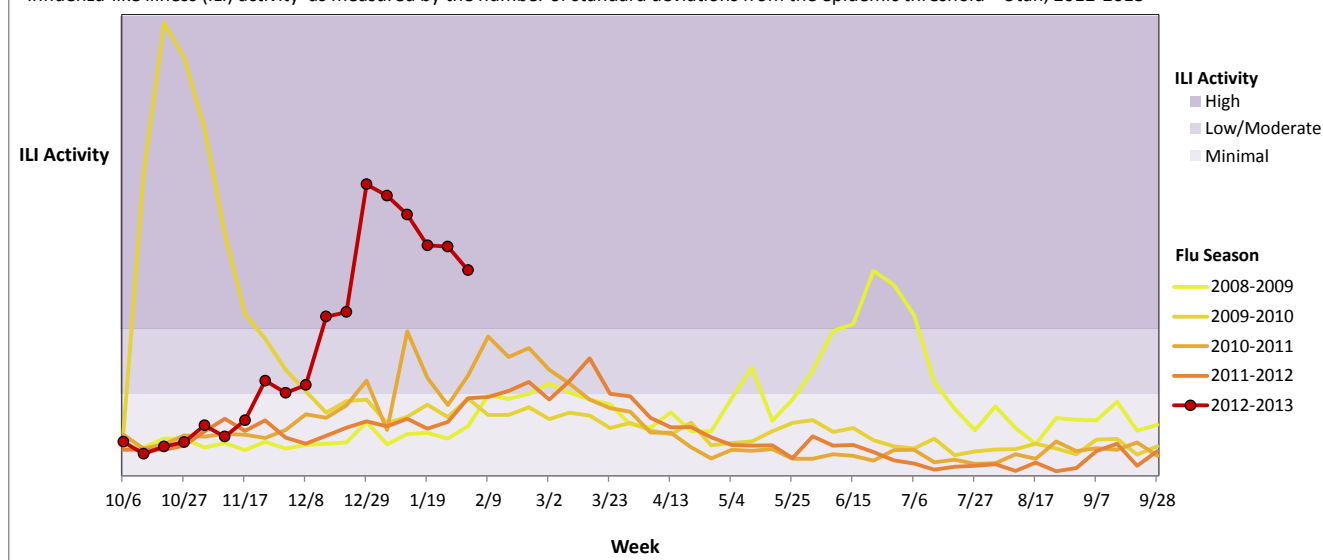


Table 1. Influenza-like Illness (ILI) Activity Levels by Health District - Utah, Current Week

Health District	ILI Activity
Bear River	High
Central	Minimal
Davis	Low/Moderate
Salt Lake	High
Southeastern	No Data
Southwest	Low/Moderate
Summit	Minimal
Tooele	Minimal
TriCounty	No Data
Utah	High
Wasatch	Low/Moderate
Weber-Morgan	Minimal
State	High

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Influenza Hospitalizations: Influenza hospitalizations are a reportable condition in Utah. A person meets the case definition for an influenza hospitalization if they are hospitalized for any length of time and have an influenza positive serology, DFA, PCR, or culture test (confirmed case) or a positive rapid influenza diagnostic test (probable case). Public health in Utah gathers a variety of data on influenza hospitalizations including clinical features, course of illness, risk and protective factors, and influenza type and subtype. Data from influenza hospitalizations allows public health in Utah to better understand subgroups of the Utah population that are most severely effected by influenza and help to guide prevention messages and interventions.

Figure 2. Influenza Hospitalizations

Number of influenza hospitalizations by event date* - Utah, 2012-2013

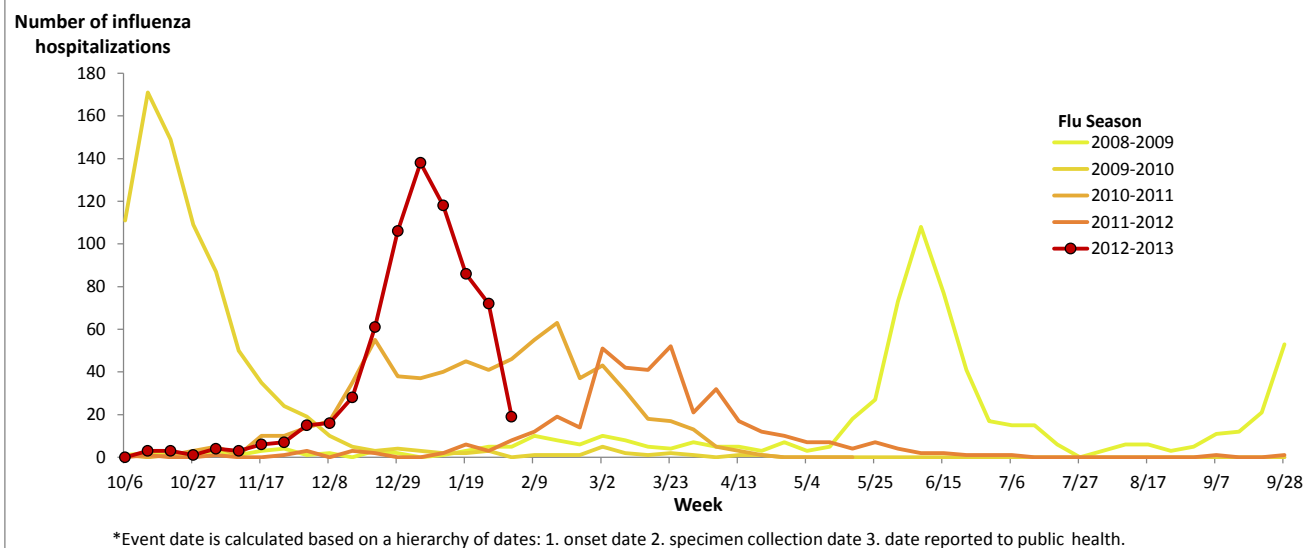


Table 2. Influenza Hospitalizations by Case Status - Utah

Case Status	Current Week		Season To Date	
	Total	% of Cases	Total	% of Cases
Confirmed	19	100.0	646	94.2
Probable	0	0.0	40	5.8
Total	19	100.0	686	100.0

Table 3. Influenza Hospitalizations by Health District - Utah

Health District	Current Week	Season To Date
Bear River	1	40
Central	0	30
Davis	0	55
Salt Lake	12	312
Southeastern	0	1
Southwest	2	79
Summit	0	11
Tooele	0	1
TriCounty	0	10
Utah	1	91
Wasatch	0	3
Weber-Morgan	3	53
State	19	686

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Table 4. Influenza Hospitalizations by Age Group - Utah, Season To Date

Age Group	Total Cases	% of Cases	Rate*
0-4	136	19.8	50.25
5-24	96	14.0	10.15
25-49	90	13.1	9.07
50-64	94	13.7	23.47
65+	270	39.4	109.32
Total	686	100.0	24.02

*Rate is calculated as the number of cases per 100,000 population

Table 5. Influenza Hospitalizations by Sex and Race - Utah, Season To Date

Variable	Num. of Cases	% of Cases	% in Utah Pop	p value*
Sex				
Male	338	49.3	50.3	0.5891
Female	346	50.4	49.7	0.6984
Unknown	2	0.3	NA	--
Race				
White, Not Hispanic	551	80.3	82.0	0.2410
Hispanic	86	12.5	11.6	0.4373
Native Hawaiian/Pacific Islander	22	3.2	0.7	<0.0001
Black/African American	13	1.9	0.9	0.0088
American Indian	2	0.3	1.1	0.0374
Asian	12	1.7	1.9	0.8170
Unknown	0	0.0	NA	--

*If a p value is ≤ 0.05 , there is a significant difference between the percentage seen in influenza hospitalizations and the general Utah population.

Table 6. Summary Data for Influenza Hospitalizations - Utah, Season To Date

Variable	Yes		No		Unknown	
	Total	% of Cases	Total	% of Cases	Total	% of Cases
ICU	78	11.4	490	71.4	118	17.2
Ventilator	32	4.7	538	78.4	116	16.9
Died	18	2.6	539	78.6	129	18.8
Neurological Symptoms	51	7.4	506	73.8	129	18.8
Healthcare Worker	5	0.7	348	50.7	333	48.5
Pregnant	22	3.2	609	88.8	55	8.0
Heart Disorder	187	27.3	379	55.2	120	17.5
Blood Disorder	16	2.3	546	79.6	124	18.1
Kidney Disorder	57	8.3	505	73.6	124	18.1
Metabolic Disorder	154	22.4	411	59.9	121	17.6
Chronic Respiratory Disorder	187	27.3	381	55.5	118	17.2
Immunosuppressed	61	8.9	499	72.7	126	18.4
Neurological Disorder	51	7.4	506	73.8	129	18.8
Seizure Disorder	21	3.1	542	79.0	123	17.9
Bacterial Co-infection	8	1.2	553	80.6	125	18.2
Obese*	81	17.9	134	29.6	238	52.5
Morbidly Obese*	17	3.8	198	43.7	238	52.5
Risk Factor†	627	91.4	59	8.6	0	0.0
Vaccinated	174	25.4	223	32.5	289	42.1

*Obesity and morbid obesity is not considered for individuals under 18 years or pregnant women. Thus total counts will not equal the total number of influenza-associated hospitalizations

†Risk factors for influenza include: persons < 5 years, persons ≥ 65 years, pregnant women, and persons with a chronic medical condition.

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Student Absenteeism: School-age children are at high risk for respiratory virus infections, including influenza. Aggregate, all-cause absenteeism data is collected weekly from over 350 schools throughout Utah. These data are analyzed to identify elevated absenteeism rates that could indicate the circulation of influenza in school-age children.

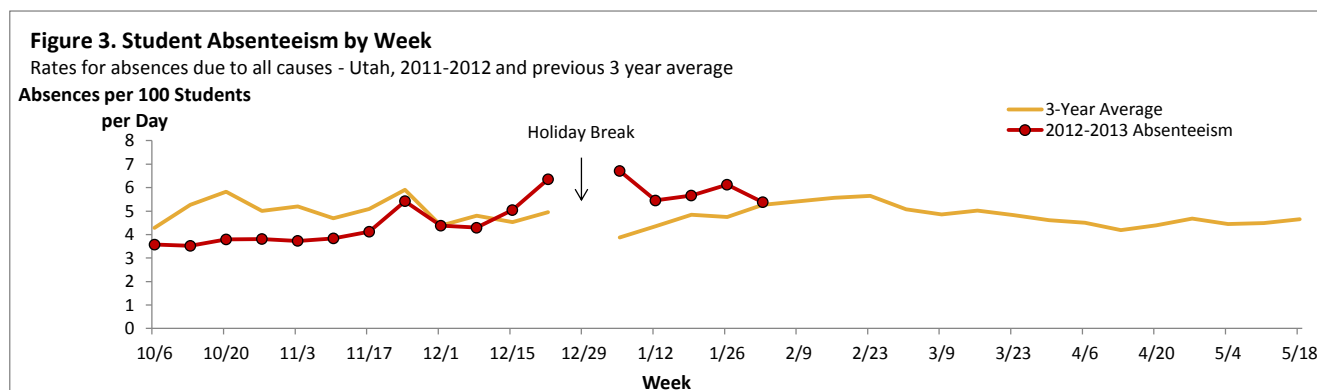
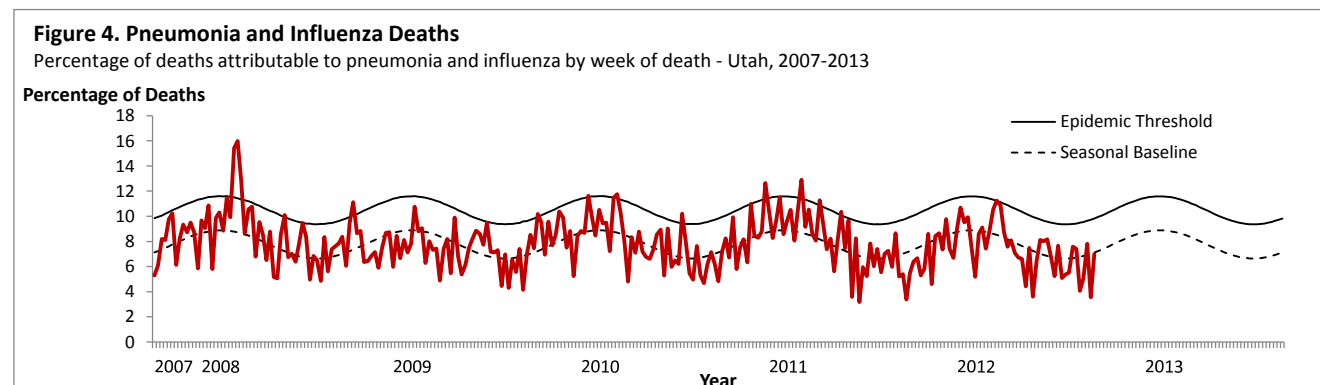


Table 7. Weekly Student Absenteeism - Utah, Current Week

Health District	Absences per 100 students/day
Bear River	4.3
Central	2.6
Davis	5.4
Salt Lake	5.2
Southeast	5.6
Southwest	6.4
Summit	--
Tooele	6.4
TriCounty	4.1
Utah	3.1
Wasatch	7.5
Weber-Morgan	6.8
State	5.4

Pneumonia and Influenza Deaths: Each week the total number of death certificates received and the number of those for which pneumonia or influenza was listed as an underlying or contributing cause of death is collected. The percentage of deaths due to pneumonia and influenza are compared with a seasonal baseline and epidemic threshold value calculated for each week. These data are used to monitor the severity of influenza illness in the community.



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Laboratory Surveillance: The Unified State Laboratory: Public Health receives specimens from all over the state for comprehensive influenza testing. All specimens are tested to determine influenza type and subtype. A portion of specimens are also sent to the Centers for Disease Control and Prevention for additional testing, including gene sequencing, antiviral resistance testing and antigenic characterization.

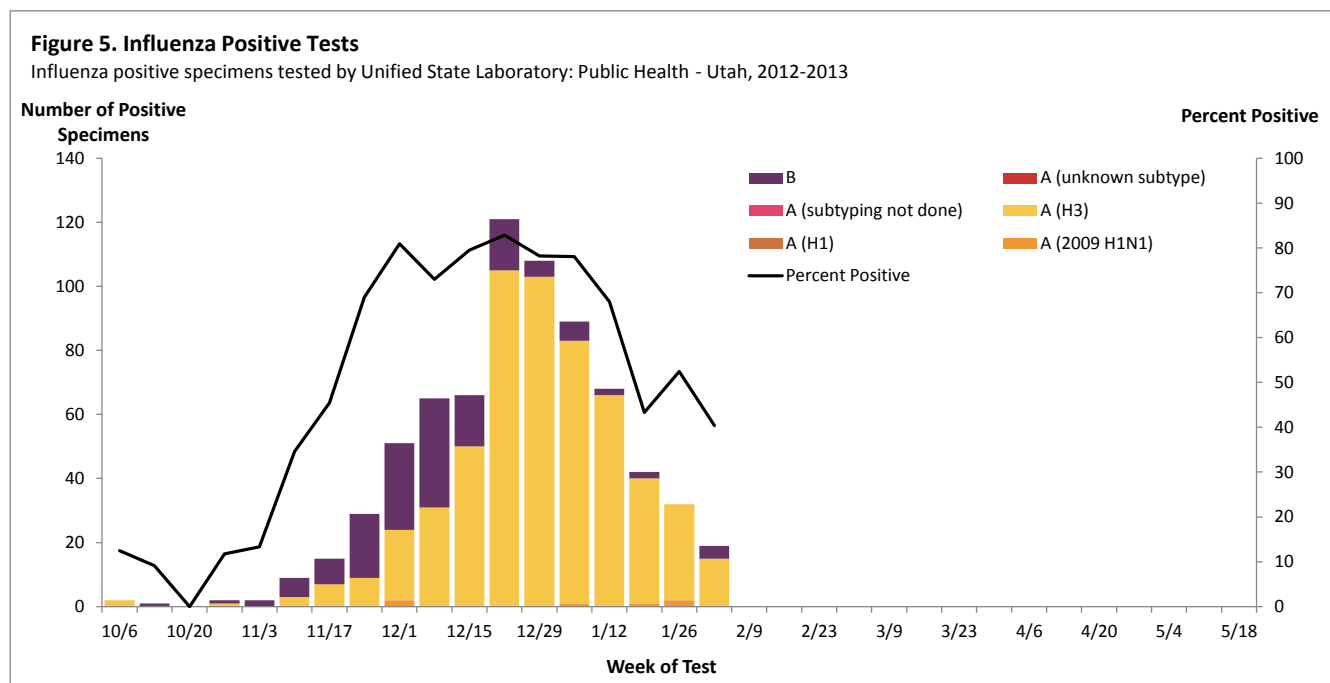


Table 8. Unified State Laboratory: Public Health Influenza Testing Data

	Current Week		Season To Date	
	Total	Percent	Total	Percent
Specimens tested	47	--	1,107	--
Positive specimens	19	40.4	721	65.1
Positive Specimens by Type/Subtype				
Influenza A	15	78.9	571	79.2
A (2009 H1N1)	0	0.0	6	1.1
A (H1)	0	0.0	0	0.0
A (H3)	15	100.0	565	98.9
A (subtyping not performed)	0	0.0	0	0.0
A (unable to subtype)	0	0.0	0	0.0
Influenza B	4	21.1	150	20.8